

REPLACEMENT SHEET

Title: A FEED FORWARD CLOCK AND DATA RECOVERY UNIT

Applicant: Peter Gregorius

Serial No.: 10/810,981

Atty Docket: 1406/145/2

1/18

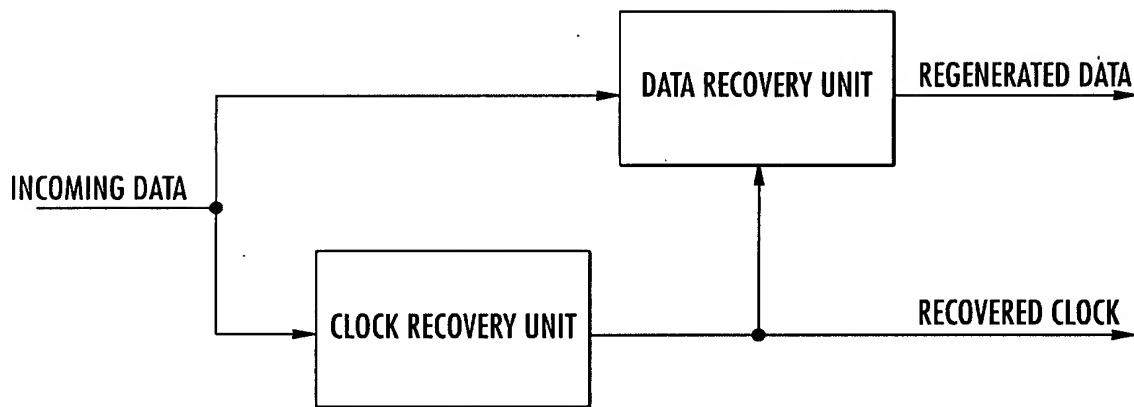


FIG. 1
(PRIOR ART)

REPLACEMENT SHEET

Title: A FEED FORWARD CLOCK AND DATA RECOVERY UNIT

Applicant: Peter Gregorius

Serial No.: 10/810,981

Atty Docket: 1406/145/2

2/18

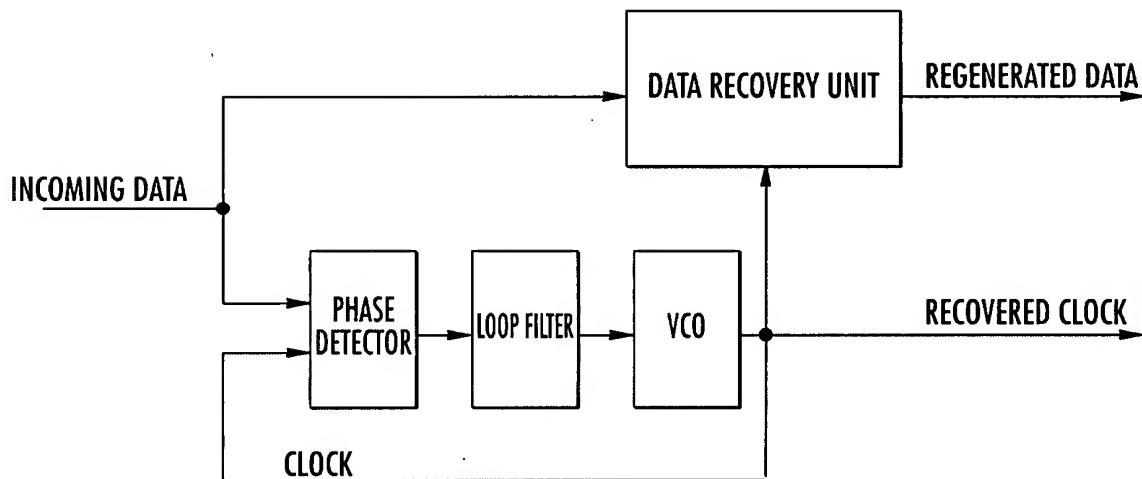


FIG. 2
(PRIOR ART)

REPLACEMENT SHEET

Title: A FEED FORWARD CLOCK AND DATA RECOVERY UNIT
Applicant: Peter Gregorius
Serial No.: 10/810,981
Atty Docket: 1406/145/2

3/18

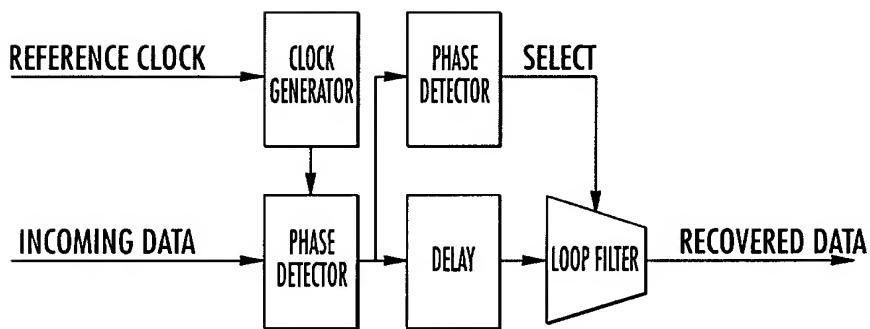


FIG. 3a

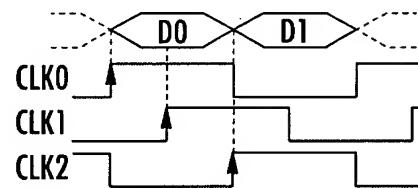


FIG. 3b

REPLACEMENT SHEET

Title: A FEED FORWARD CLOCK AND DATA RECOVERY UNIT
 Applicant: Peter Gregorius
 Serial No.: 10/810,981
 Atty Docket: 1406/145/2

4/18

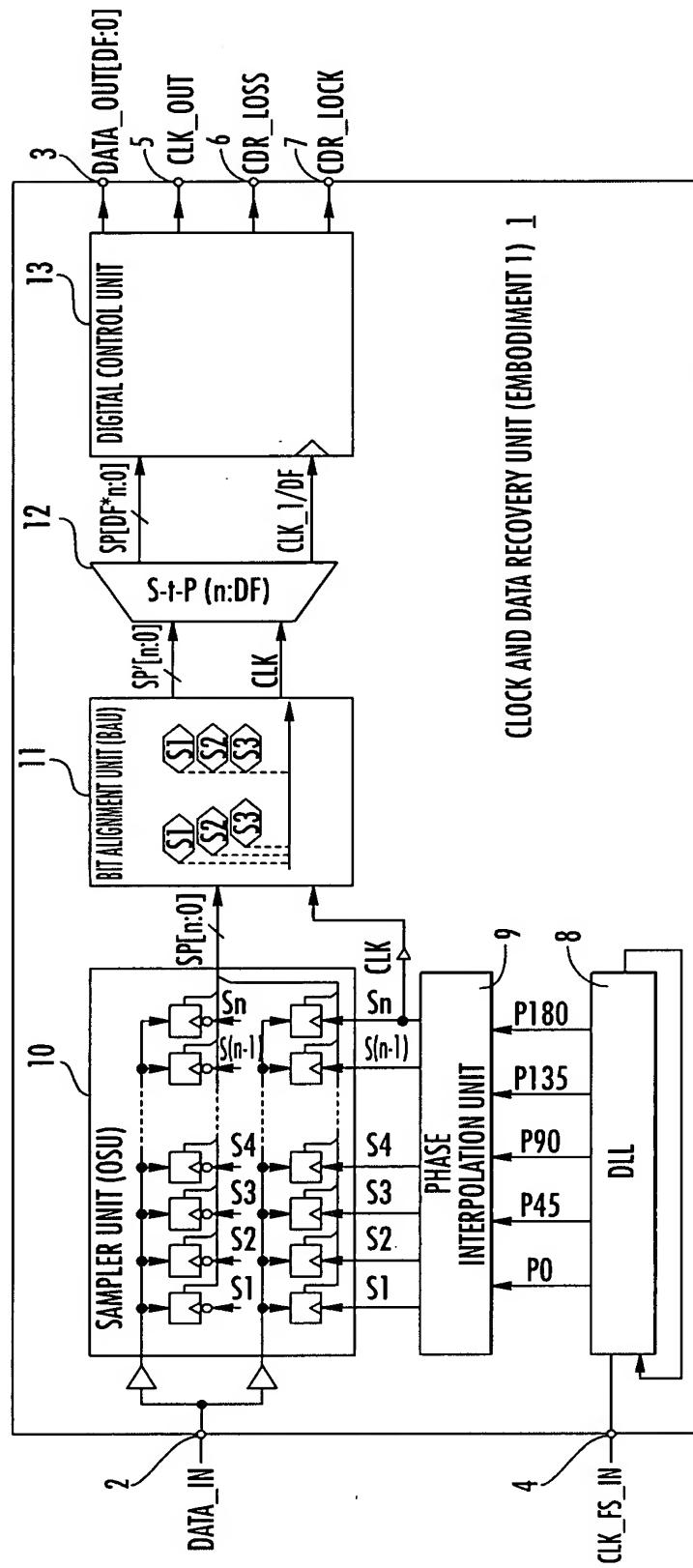


FIG. 4

REPLACEMENT SHEET

Title: A FEED FORWARD CLOCK AND DATA RECOVERY UNIT

Applicant: Peter Gregorius

Serial No.: 10/810,981

Atty Docket: 1406/145/2

5/18

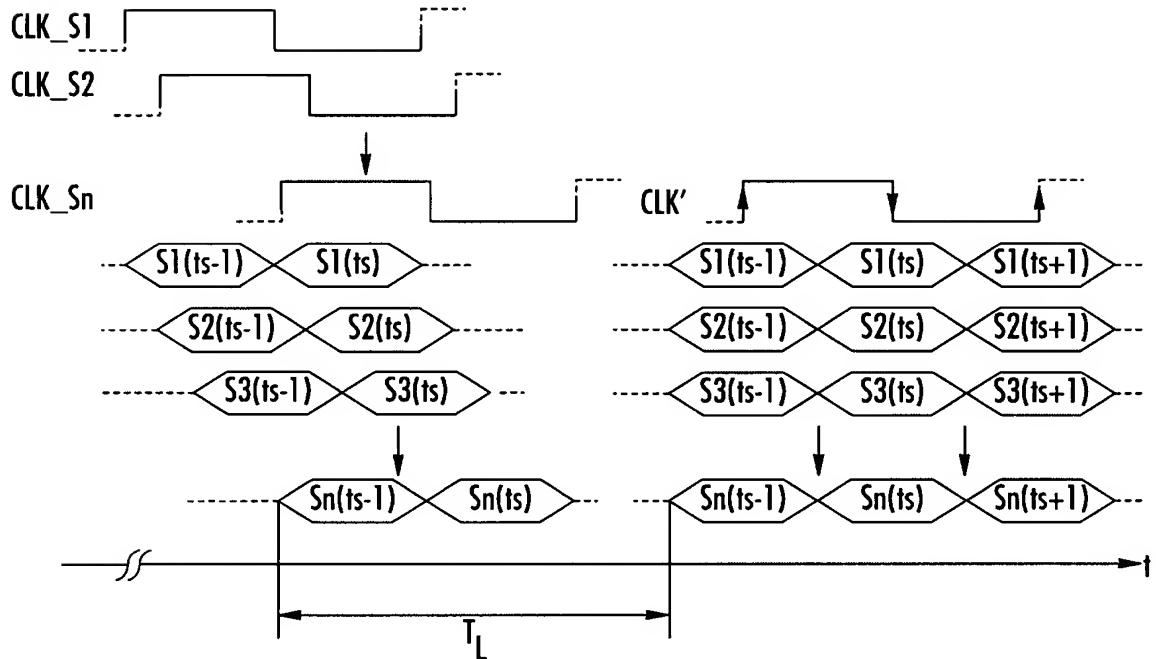


FIG. 5

REPLACEMENT SHEET

Title: A FEED FORWARD CLOCK AND DATA RECOVERY UNIT
 Applicant: Peter Gregorius
 Serial No.: 10/810,981
 Atty Docket: 1406/145/2

6/18

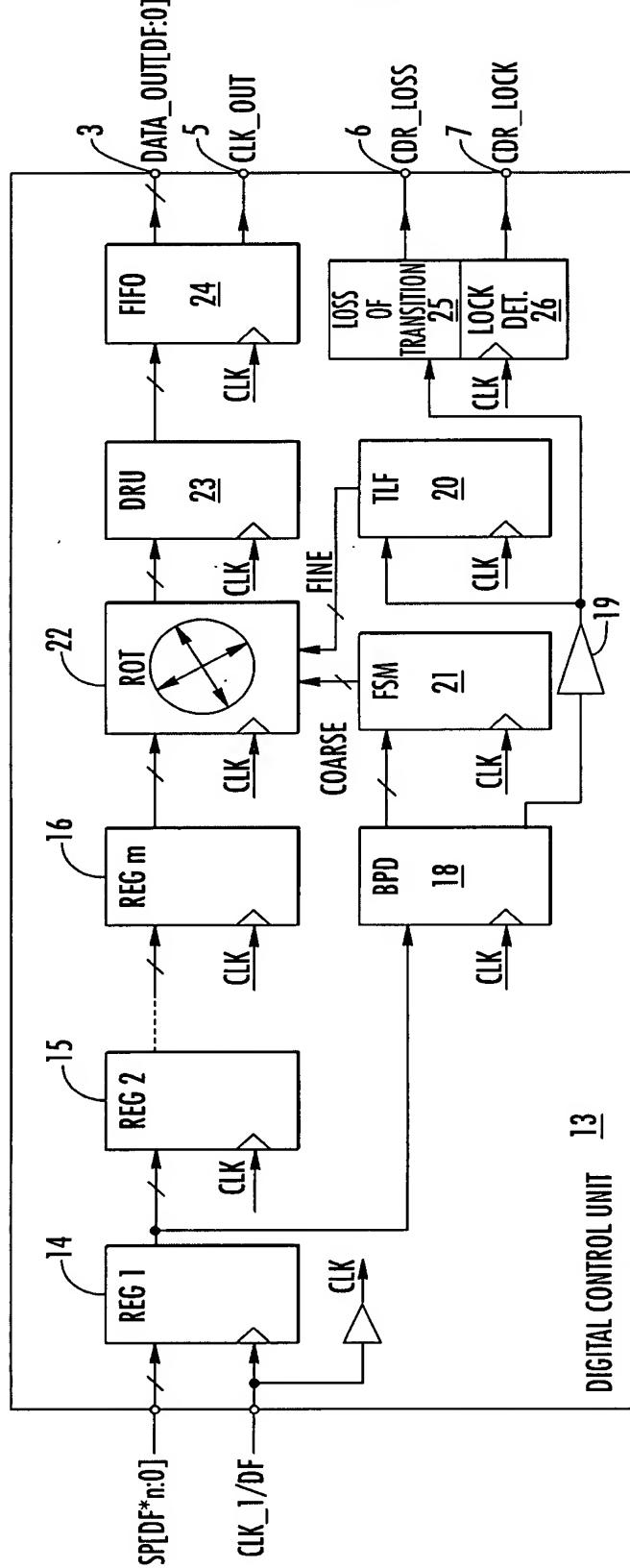


FIG. 6

REPLACEMENT SHEET

Title: A FEED FORWARD CLOCK AND DATA RECOVERY UNIT

Applicant: Peter Gregorius

Serial No.: 10/810,981

Atty Docket: 1406/145/2

7/18

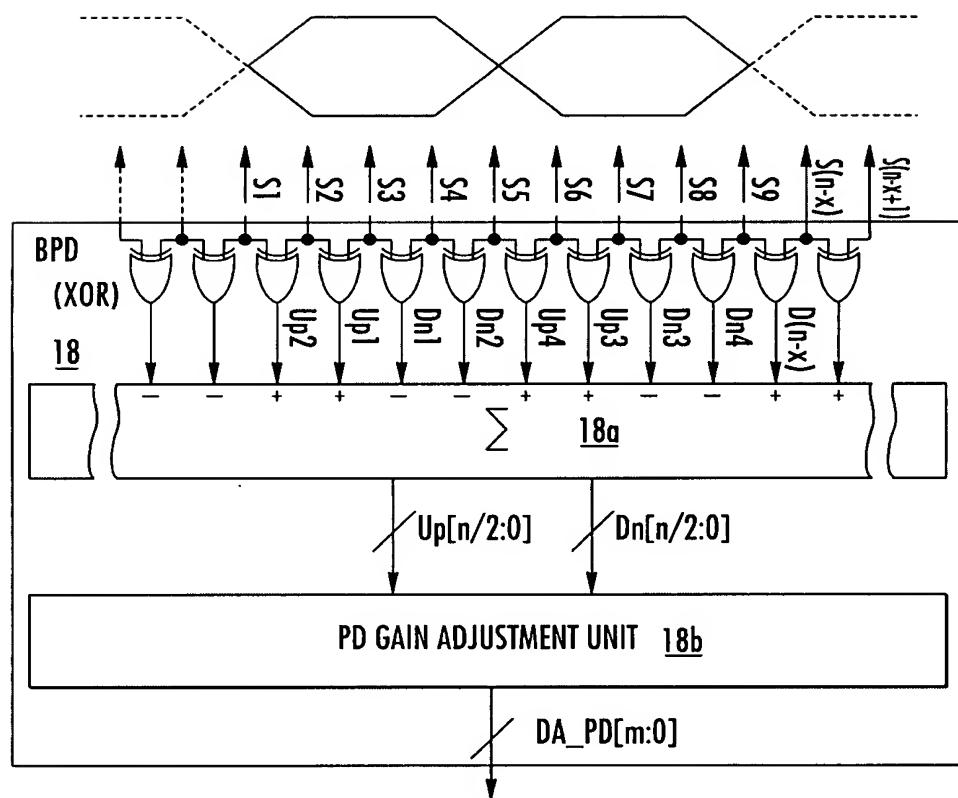


FIG. 7a

REPLACEMENT SHEET

Title: A FEED FORWARD CLOCK AND DATA RECOVERY UNIT
 Applicant: Peter Gregorius
 Serial No.: 10/810,981
 Atty Docket: 1406/145/2

8/18

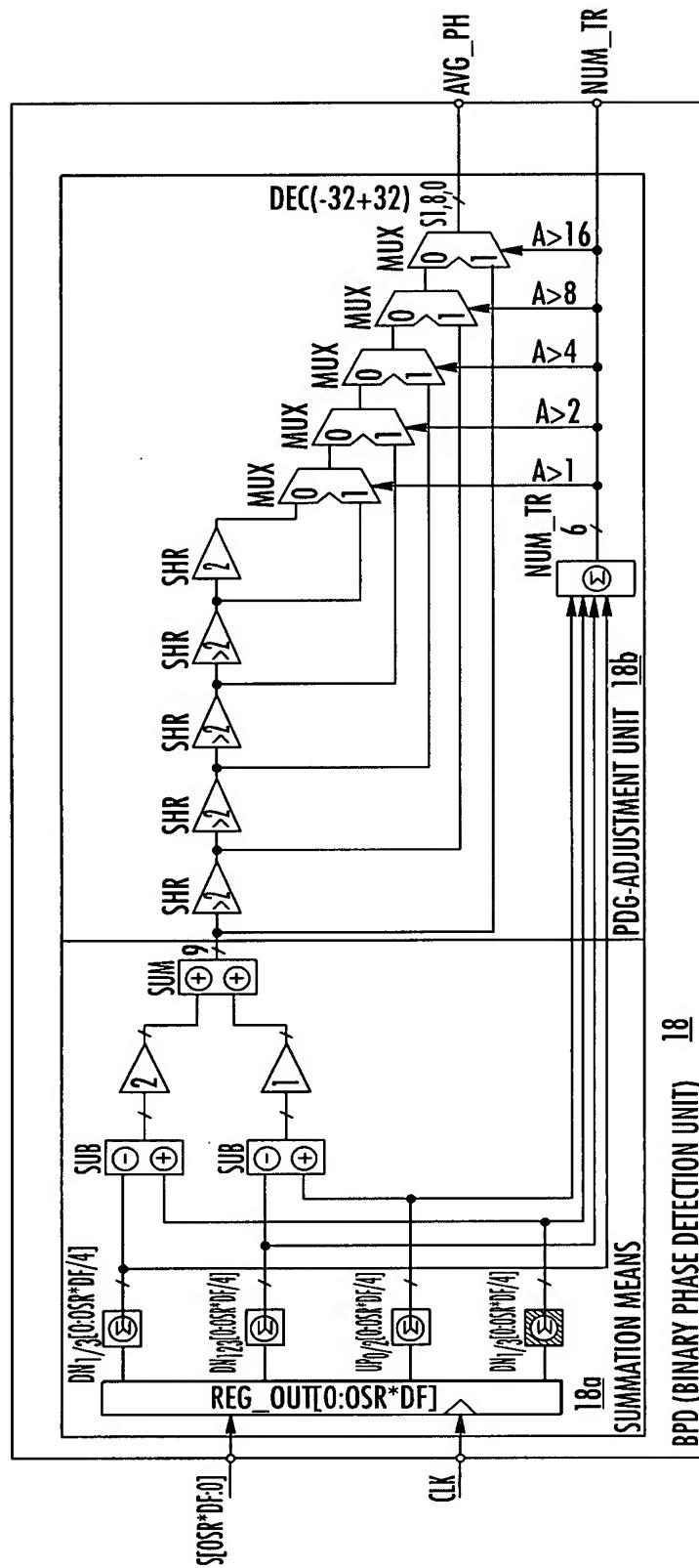


FIG. 7b

9/18

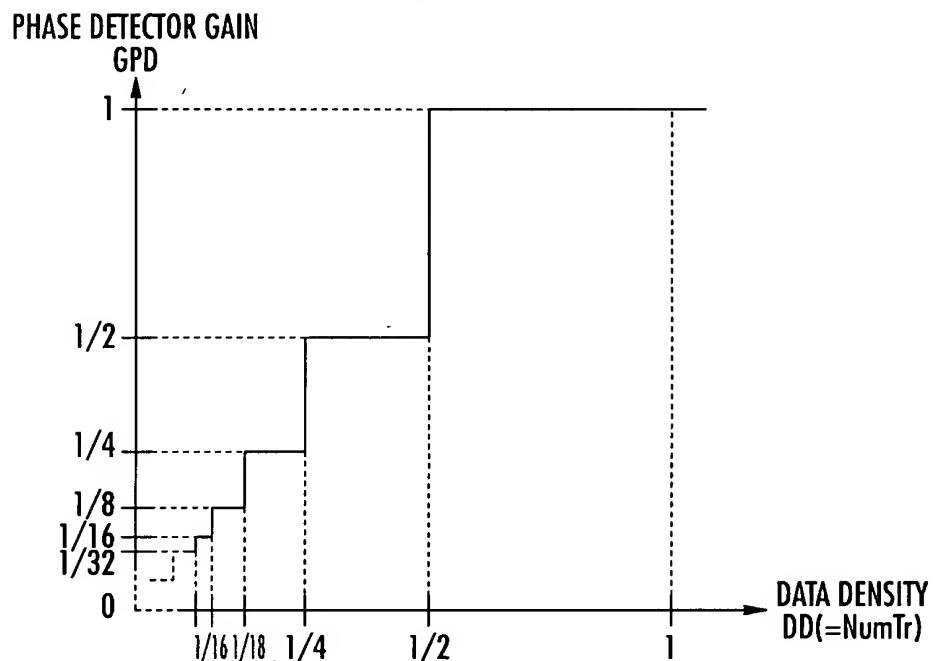


FIG. 8a
(PRIOR ART)

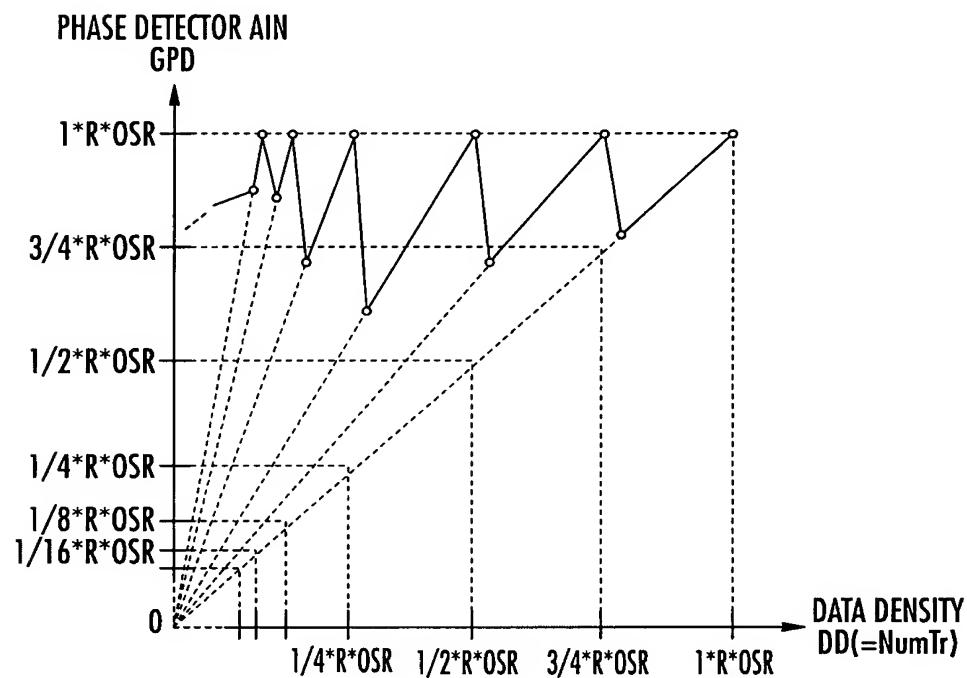


FIG. 8b

REPLACEMENT SHEET

Title: A FEED FORWARD CLOCK AND DATA RECOVERY UNIT

Applicant: Peter Gregorius

Serial No.: 10/810,981

Atty Docket: 1406/145/2

10/18

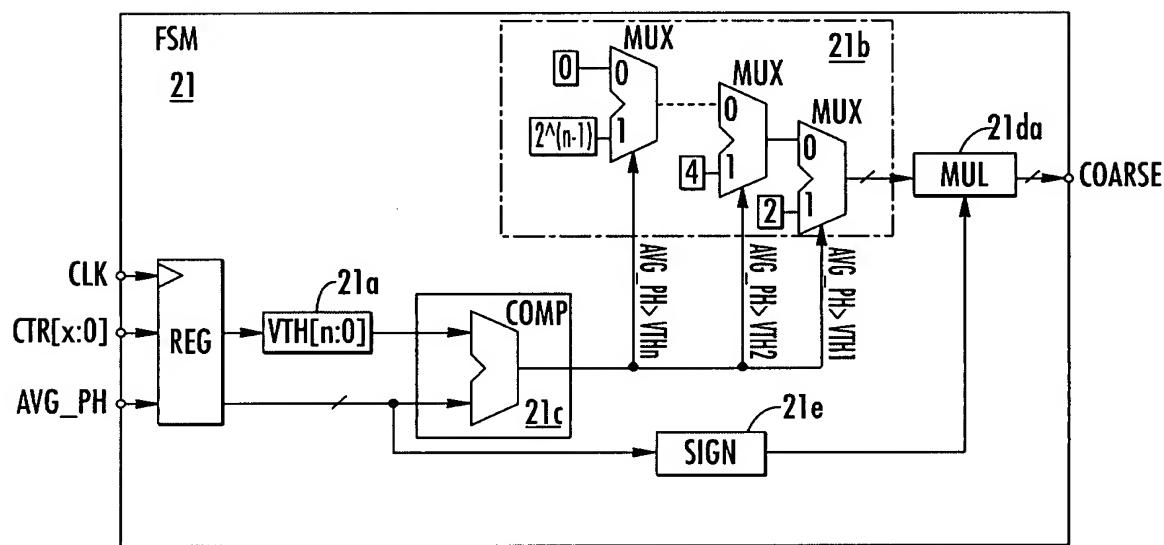


FIG. 9

REPLACEMENT SHEET

Title: A FEED FORWARD CLOCK AND DATA RECOVERY UNIT

Applicant: Peter Gregorius

Serial No.: 10/810,981

Atty Docket: 1406/145/2

11/18

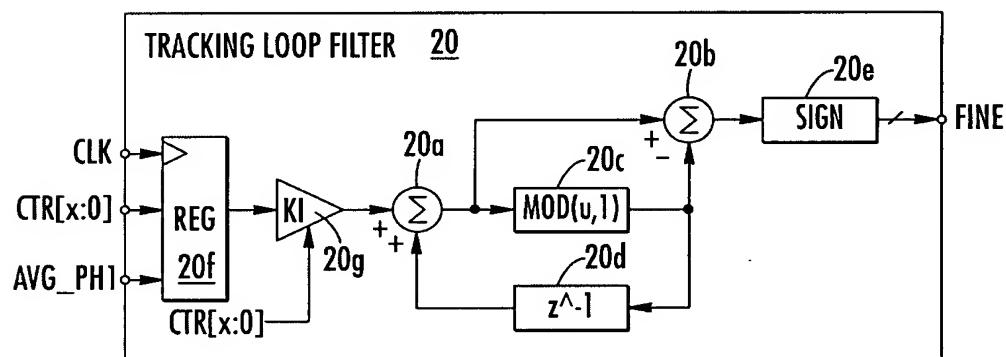


FIG. 10

REPLACEMENT SHEET

Title: A FEED FORWARD CLOCK AND DATA RECOVERY UNIT

Applicant: Peter Gregorius

Serial No.: 10/810,981

Atty Docket: 1406/145/2

12/18

MODULUS
CALCULATION
UNIT

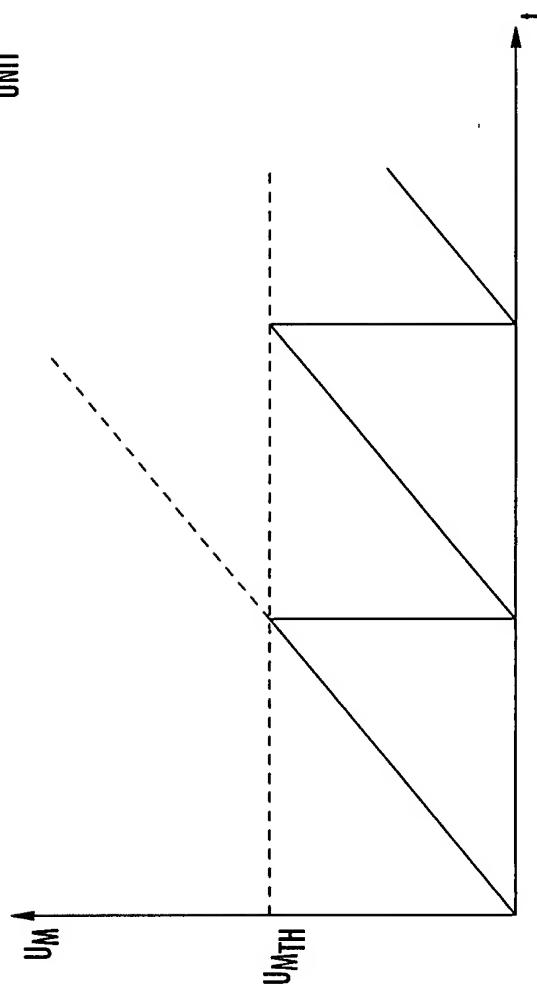


FIG. 11

REPLACEMENT SHEET

Title: A FEED FORWARD CLOCK AND DATA RECOVERY UNIT
 Applicant: Peter Gregorius
 Serial No.: 10/810,981
 Atty Docket: 1406/145/2

13/18

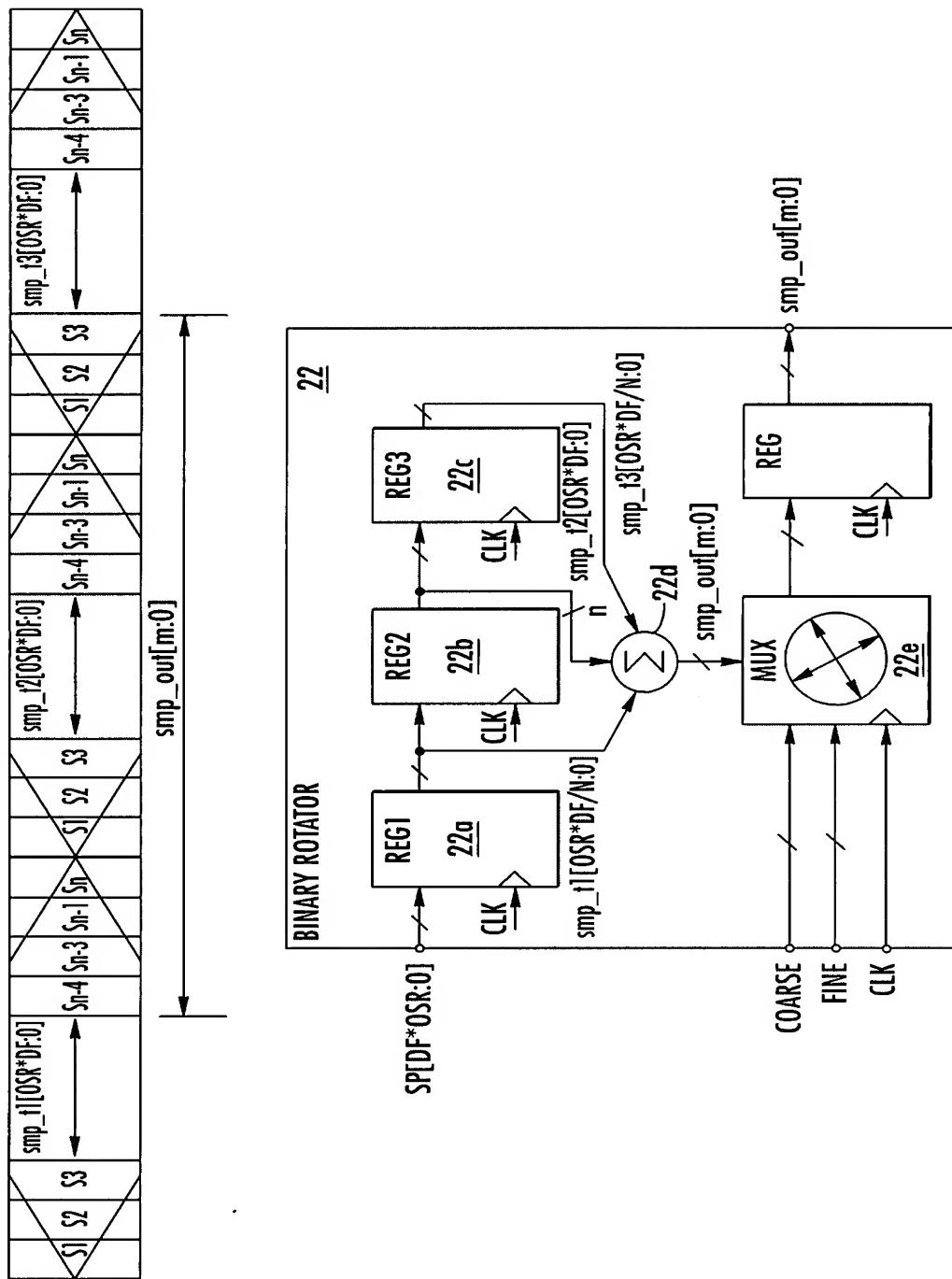


FIG. 12

REPLACEMENT SHEET

Title: A FEED FORWARD CLOCK AND DATA RECOVERY UNIT

Applicant: Peter Gregorius

Serial No.: 10/810,981

Atty Docket: 1406/145/2

14/18

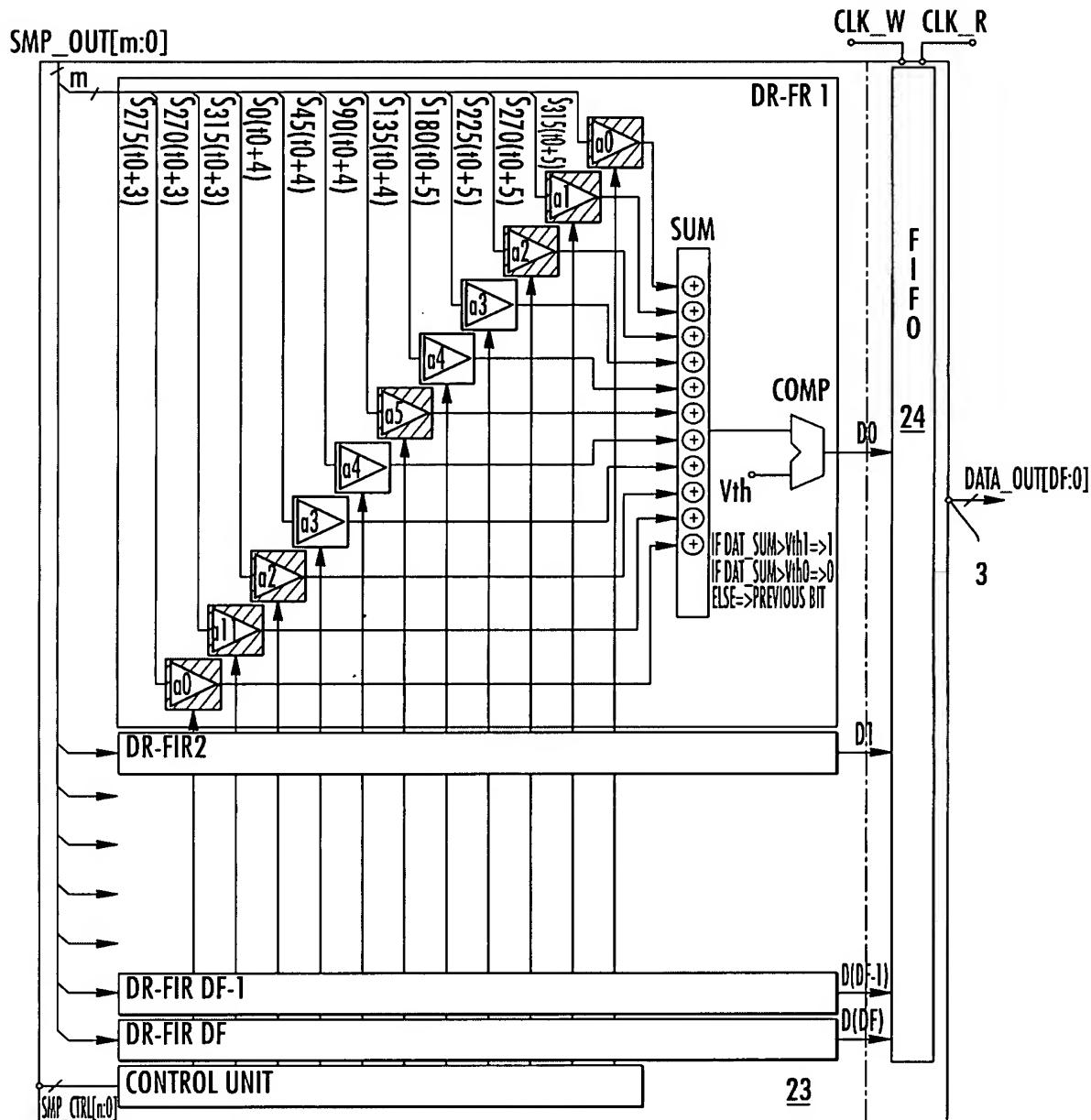


FIG. 13

REPLACEMENT SHEET

Title: A FEED FORWARD CLOCK AND DATA RECOVERY UNIT

Applicant: Peter Gregorius

Serial No.: 10/810,981

Atty Docket: 1406/145/2

15/18

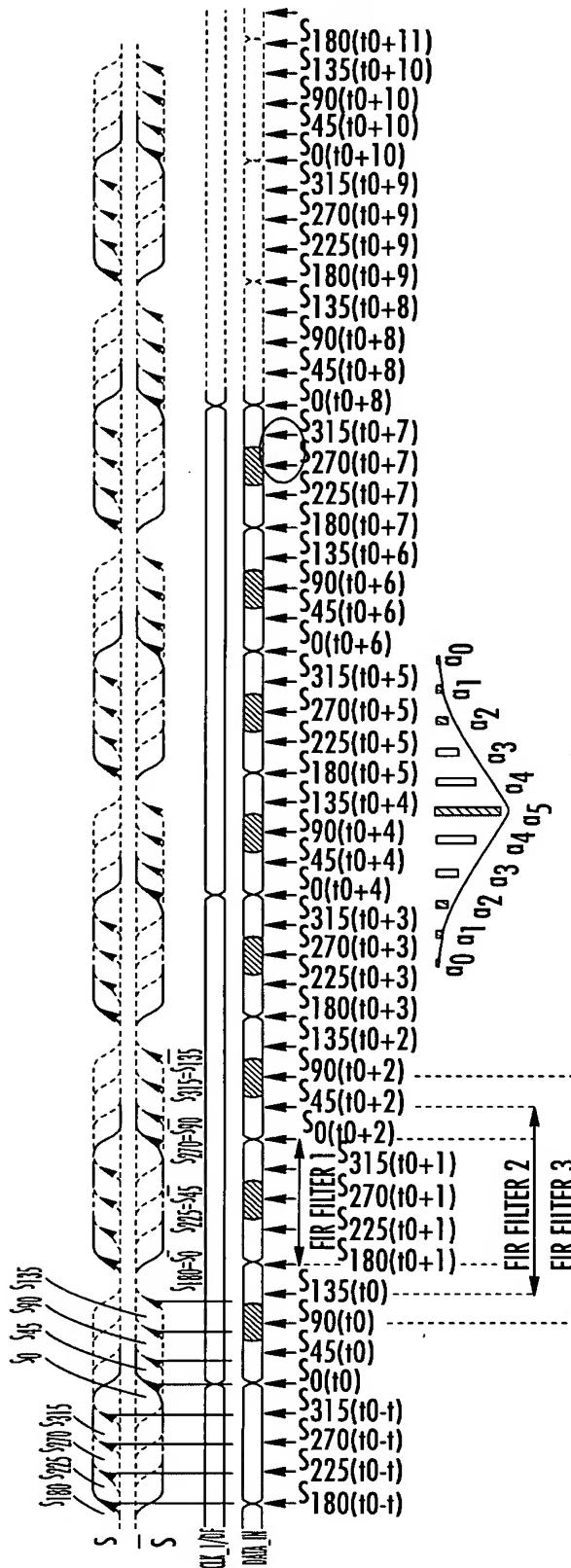


FIG. 14

REPLACEMENT SHEET

Title: A FEED FORWARD CLOCK AND DATA RECOVERY UNIT
 Applicant: Peter Gregorius
 Serial No.: 10/810,981
 Atty Docket: 1406/145/2

16/18

$$H_{FIR}(z) = a_0 + a_1 \cdot z^1 + a_2 \cdot z^2 + a_3 \cdot z^3 + a_4 \cdot z^4 + a_5 \cdot z^5 \dots$$

$$g(t) = K \cdot \frac{\sin \omega_k(t-10)}{\pi(t-10)}$$

$$P_g = \sum_{k=1}^{K=10} g(t=ts^k) S_k$$

TRANSFER FUNCTION

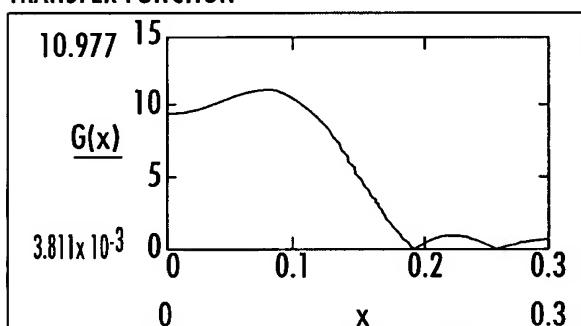


FIG. 15a

IMPULSE RESPONSE

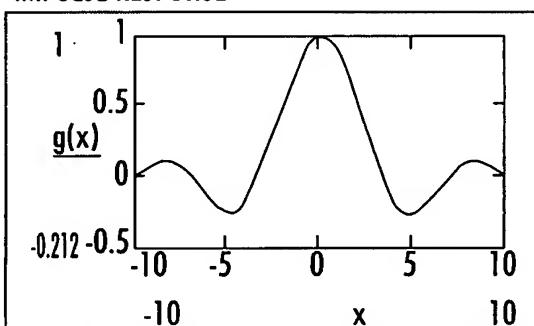
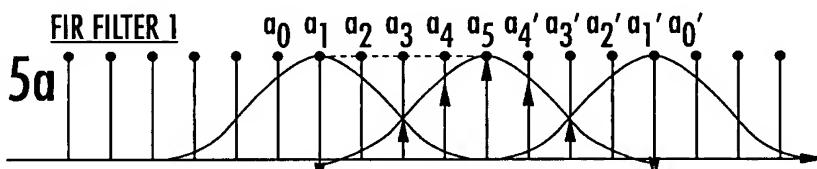


FIG. 15b

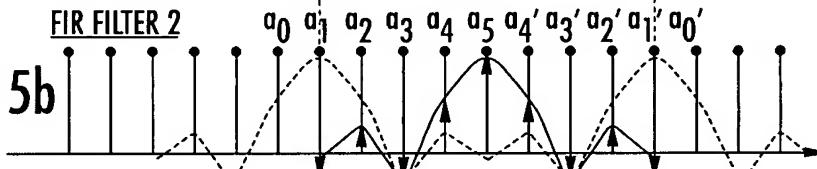
FIR FILTER 1

FIG. 15a



FIR FILTER 2

FIG. 15b



FIR FILTER 3

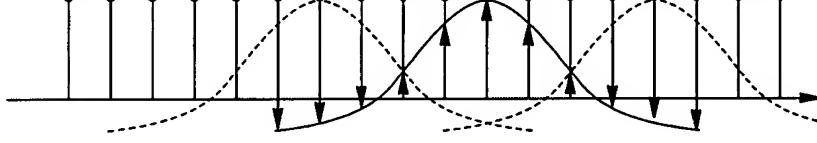


FIG. 15c

FIG. 15

FILTER COEFFICIENTS

	FILTER A	FILTER B	FILTER C
a_0	0	0	-18
a_1	.1	-.6	-14
a_2	0	8	-8
a_3	20	-.13	17
a_4	50	40	50
a_5	64	64	64
a_4'	50	40	50
a_3'	20	-.13	19
a_2'	0	8	-6
a_1'	-1	-.6	-14
a_0'	0	0	-18

REPLACEMENT SHEET

Title: A FEED FORWARD CLOCK AND DATA RECOVERY UNIT
 Applicant: Peter Gregorius
 Serial No.: 10/810,981
 Atty Docket: 1406/145/2

17/18

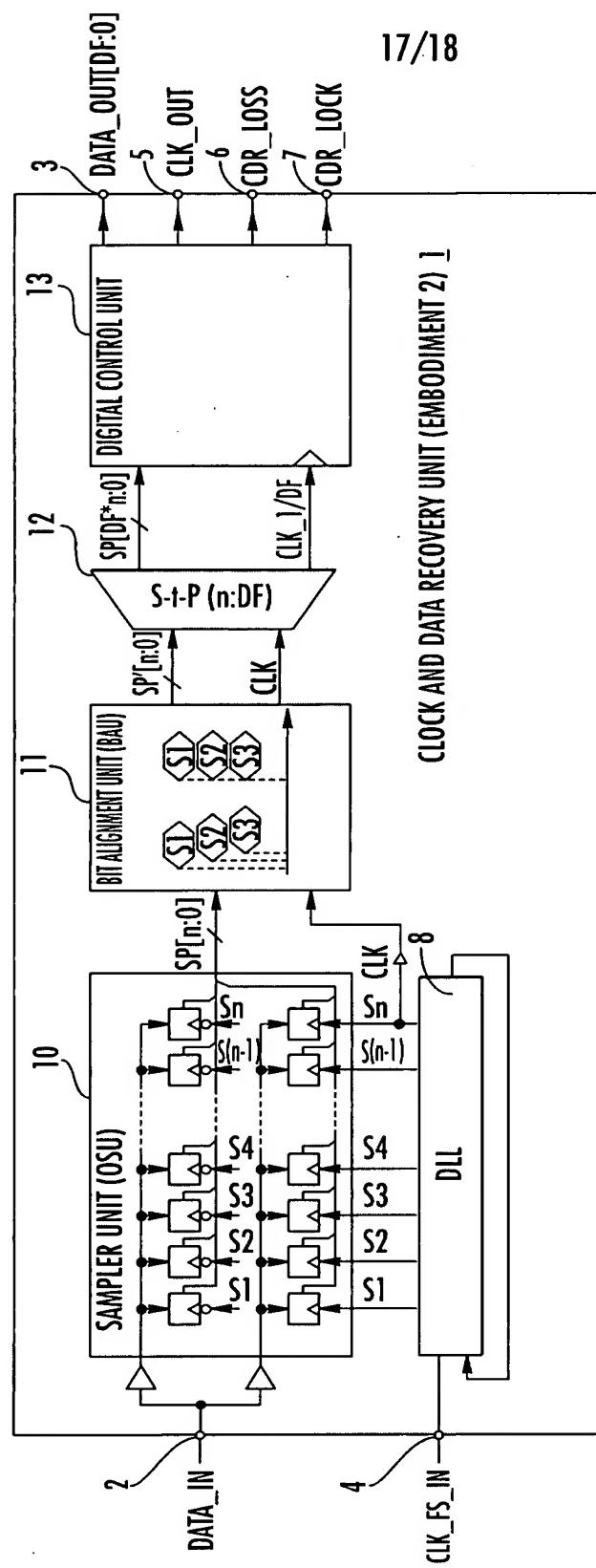


FIG. 16

REPLACEMENT SHEET

Title: A FEED FORWARD CLOCK AND DATA RECOVERY UNIT
 Applicant: Peter Gregorius
 Serial No.: 10/810,981
 Atty Docket: 1406/145/2

18/18

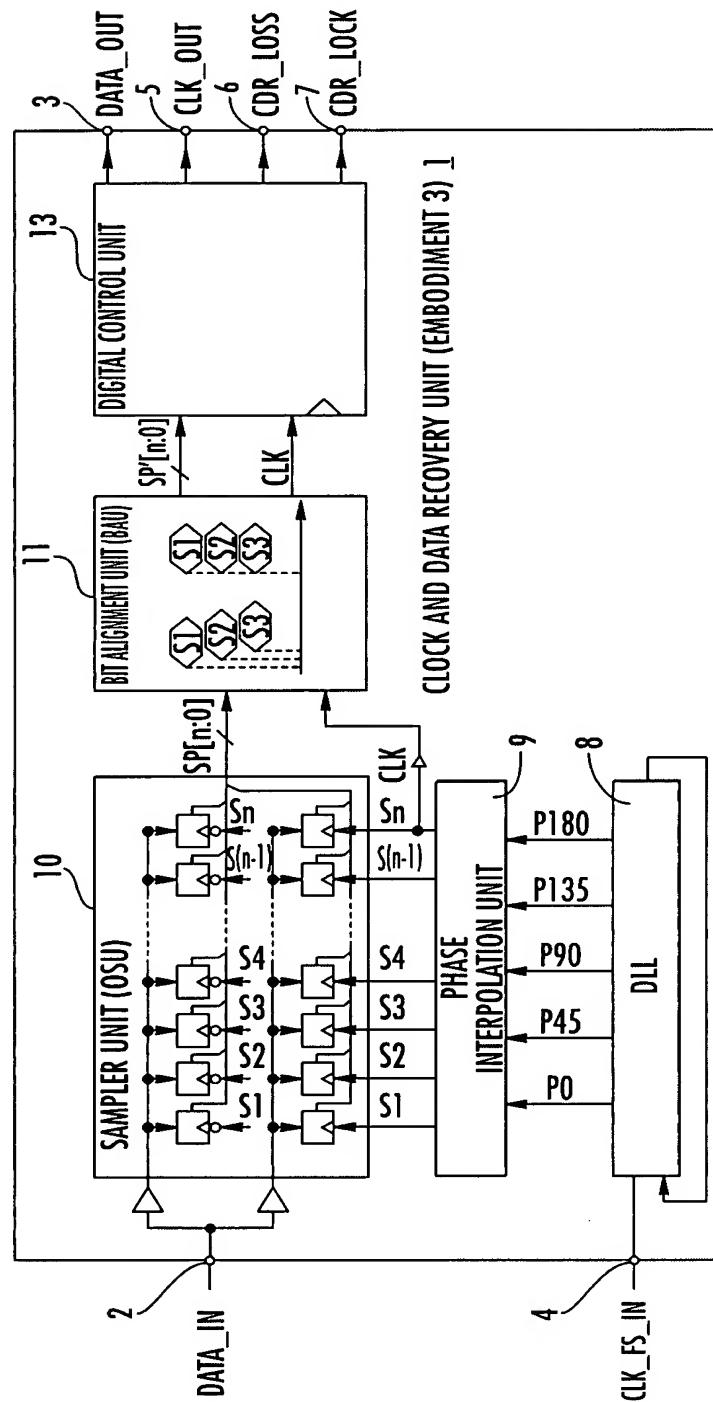


FIG. 17